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NO. 03-433

IN THE

SUPREME COURT OF THE UNITED STATES

ALCAN ALUMINUM CORPORATION

Petitioner,

v.

UNITED STATES OF AMERICA
AND STATE OF NEW YORK

Respondents.

On Petition for Writ of Certiorari to the
United States Court of Appeals for the Second Circuit

BRIEF *AMICUS CURIAE* OF ATLANTIC STATES LEGAL FOUNDATION, INC. IN SUPPORT OF PETITIONER

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STATEMENT OF INTEREST OF *AMICUS CURIAE*

Atlantic States Legal Foundation, Inc. (the "Foundation") is a not-for-profit corporation established in 1982 to promote and protect the environment. The Foundation is a membership organization headquartered in Syracuse, New York, and it is active throughout the United States and abroad.

The Foundation provides legal, technical and organizational assistance on environmental issues to citizen organizations, individuals and local governments. The Foundation is active in projects involving watershed restoration, pollution control, environmental policy, environmental justice, and community education. The Foundation also brings lawsuits against corporate polluters under the citizen suit provisions of the major federal environmental statutes. In addition, the Foundation regularly files amicus briefs in cases that address important environmental issues.

The Foundation has a strong interest in this case because the Second Circuit failed to apply sound scientific principles in ruling on the Petitioner's environmental liability. The failure of courts to apply the most basic scientific principles can undermine efforts of the environmental advocacy community and be detrimental to the environment. The Foundation and other environmental advocates often rely on scientific models and laboratory testing to prove contamination exists and to determine the success of remediation efforts. If courts do not apply sound scientific principles, polluters may escape liability and site remediation efforts may fall short. While in this case Petitioner is an alleged polluter that is trying to escape or limit its liability, the Foundation nonetheless supports the

petition for a writ of *certiorari* because of its strong interest in the federal courts' use of sound scientific principles in all environmental cases. [1]

INTRODUCTION AND SUMMARY OF ARGUMENT

The Foundation believes it is vitally important for the Court to grant the writ of *certiorari* to supply needed guidance to the courts on how to apply scientific principles to environmental issues. The Court has addressed the admissibility of scientific and other expert opinions in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999). Once such opinions are admitted or otherwise made part of the record, courts must apply the expert opinions properly to assure their decisions are based on sound scientific evidence. The integrity of court decisions is threatened if courts disregard valid scientific models or ignore laboratory test results without sound reasons. This case provides the Court with the ideal opportunity to provide needed guidance on the role of scientific models and laboratory test results in decisions that turn on the presence or absence of chemical substances.

This case involves the liability of Petitioner Alcan Aluminum Corporation ("Alcan") under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675. During the 1970s, Alcan sent waste emulsion to a site operated by Pollution Abatement Services (PAS) and to another site operated by Fulton Terminals, Inc. *See* Pet. App. 34a.

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[1] Letters of consent from all parties have been filed with the Clerk of the Court. No counsel for any party authored this brief in whole or in part. Petitioner Alcan Aluminum Corporation made a monetary contribution to the preparation of this brief.

The Second Circuit stated Alcan can escape joint and several liability under CERCLA "if it either succeeds in proving that its oil emulsion, when mixed with other hazardous wastes, did not contribute to the release and clean-up costs that followed, or contributed at most to only a divisible portion of the harm." *United States v. Alcan Aluminum Corp.*, 315 F.3d 179, 185 (2d Cir. 2003) (citations omitted), reprinted at Pet. App. 2a-17a, 8a. If Alcan can show its emulsion did not contribute to the release and clean-up costs, it escapes all liability. If Alcan cannot make this showing, it can nonetheless limit its liability by showing its emulsion contributed to only a divisible portion of the harm. *See id.* at Pet. App. 8a, 10a.

The Second Circuit elaborated on what Alcan needs to show to escape all liability. The court stated that the avoidance of all liability is a "special exception" available only if "the company could prove that its pollutants did not contribute more than background contamination and also cannot concentrate." *Id.* at Pet. App. 8a (citations omitted).

If Alcan does not qualify for the special exception, it can still limit its liability by presenting "evidence relevant to establishing divisibility of harm." *Id.* If it makes this showing, Alcan is liable for an apportioned share of outstanding costs.

After a bench trial, the district court gave two independent reasons why Alcan could not escape all liability. First, the district court found Alcan's waste emulsion contained polychlorinated biphenyls (PCBs). The court stated there are no naturally occurring background levels of PCBs, so the special exception was not available to Alcan. *See United States v. Alcan Aluminum Corp.*, 97 F. Supp. 2d 248, 268-69 (N.D.N.Y. 2000), reprinted at Pet. App. 18a-

64a, 50a. Second, the court found that Alcan did not meet its burden of showing that metals in its emulsion could not concentrate. The court predicated this decision in part on a finding that Alcan's emulsion contained nickel, which was detected at above background levels at the PAS and Fulton sites. *See id.*

The Second Circuit held, without elaboration, that the record contained "ample evidence" to support the district court's finding that Alcan's waste emulsion contained nickel and PCBs. Pet. App. 10a. The Second Circuit then stated the special exception was not available to Alcan because of the presence of PCBs in Alcan's emulsion. *See id.* The Second Circuit did not reach the issue of whether its nickel ruling would provide an independent ground for making the special exception unavailable.

The Second Circuit's decision does not set forth the specific evidence it relied on for its ruling about the presence of PCBs and nickel. However, to find PCBs in the emulsion, the Second Circuit would have had to disregard scientific models about PCB behavior in Alcan's emulsion at the two sites. These models were provided by a court-appointed expert, and the court had no basis to disregard them. To find nickel in the emulsion, the Second Circuit would have had to accept a hypothesis by two experts about the presence of nickel in Alcan's emulsion. However, the hypothesis was invalidated by numerous laboratory test results showing nickel was not detected in the emulsion. The court had no basis to ignore the test results. Where unambiguous testing data proved a scientific hypothesis was wrong, the Second Circuit should have thrown out the hypothesis, not the data.

ARGUMENT

THE SECOND CIRCUIT ERRED BY SUBJECTING A COMPANY TO CERCLA LIABILITY WHERE SUCH LIABILITY COULD BE FOUND ONLY IF THE COURT DISREGARDED, FOR NO SOUND REASON, SCIENTIFIC MODELS AND LABORATORY TEST RESULTS.

A. The Second Circuit Erred By Concluding That A Company Is Subject To CERCLA Liability Where Such A Conclusion Could Be Made Only If The Court Ignored, For No Sound Reason, Scientific Models That Bear Directly On The Presence Or Absence Of Hazardous Substances.

The Second Circuit should not have the discretion to disregard, for no sound reason, scientific models that bear directly on the question of the presence or absence of hazardous substances. In this case, the court-appointed expert's models described how PCBs in Alcan's emulsion would have behaved at the PAS and Fulton sites if the emulsion had contained PCBs. *See* C.A. App. 1070, 1077. These models are in the expert's report that is part of the record in this case. *See* Pet. App. 22a n.3.

The government tested for the presence of PCBs at the locations where the models said they should be present if they had been in Alcan's emulsion. When one considers the undisputed test results at the sites, the only conclusion that is consistent with these models is that Alcan's emulsion did not contain PCBs. These models should have been dispositive, but the Second Circuit apparently relied instead on indirect, circumstantial evidence that was not supported by the test results at the sites.

1. PAS Site

At the PAS site, Alcan's waste emulsion, together with wastes from many other entities, was deposited into a large lagoon. The lagoon was stratified into three layers: a top oily layer, a middle aqueous layer, and a bottom sludge layer. *See* Pet. App. 29a. The district court found that Alcan's emulsion initially occupied the middle aqueous layer and eventually broke down so some of the waste likely would have ended up in the top oily layer. *See* Pet. App. 43a.

The court-appointed expert provided a scientific model for how PCBs in Alcan's emulsion would behave in the lagoon. He stated PCBs from Alcan's emulsion would largely associate with the top oily layer and the bottom sludge layer. *See* C.A. App. 1070, 1077.

Government testing of the lagoon found PCBs only in the top oily layer, not in the bottom layer. *See* Pet. App. 43a. The model says if PCBs had been in the emulsion, some would have accumulated in the bottom sludge layer. Since none were in the bottom layer, the conclusion from the model is that no PCBs had been in Alcan's emulsion.

The Second Circuit did not elaborate on its finding that the emulsion contained PCBs, so we do not know why the Second Circuit disregarded the model. The district court, however, provided the reasons for its own finding. The court-appointed expert's model was about PCB behavior *in the emulsion* in the lagoon, but the district court apparently thought the model was about PCB behavior *anywhere* in the lagoon. Because PCBs unquestionably resided in the top oily layer, the court reasoned, the expert's opinion that PCBs would also concentrate in the bottom layer had to be wrong,

because no PCBs in fact were found in the bottom layer. *See* the district court's August 8, 2000 Decision and Order denying Alcan's motion for reconsideration, C.A. App. 196-97 n. 9 & 10. However, the model did not address how PCBs in the top oily layer would behave, because the court-appointed expert was not asked to address this. *See* C.A. App. 1077, 1070. The district court judge thus wrongly threw out the model and the conclusion that PCBs were not present in Alcan's emulsion.

The district court also stated that variability in the lagoon's layers cast doubt on the conclusiveness of the PCB testing. *See* Pet. App. 43a-44a. However, there is no evidence that PCBs would have accumulated as discrete deposits that would be easily missed by sampling. Moreover, sludge variability was not an issue at the Fulton site, discussed *infra*. In light of the sludge test results at both the PAS and Fulton sites, the district court judge should not have concluded its own expert's model was wrong.

2. Fulton Site

The parties stipulated that the Fulton site was contaminated by leaks and spills from various tanks, including Tank One. *See* C.A. App. 236-37. They also stipulated Alcan's emulsion had been stored in Tank One at the Fulton site. *See id.* at 236. When the government tested the contents of Tank One, the tank was empty except for sludge in the bottom. *See* Pet. App. 44a. PCBs were not detected in the sludge. *See id.* Nor were PCBs detected in the soils surrounding Tank One. *See* C.A. App. 197.

The court-appointed expert provided a scientific model for how any PCBs in Alcan's emulsion would have behaved in the tank at Fulton. He stated he would have expected PCBs to accumulate in the sludge layer at the

bottom of the tank. *See* C.A. App. 1070, 1077. Since PCBs were not found in the sludge, the conclusion from the model is that no PCBs had been in Alcan's emulsion.

Again, the Second Circuit does not elaborate on why it found PCBs in Alcan's emulsion, so we do not know why the Second Circuit disregarded this model. The district court's opinion shows the district court simply ignored the model:

> While no PCBs were found in the sludge-like material remaining in the bottom of the tank, Alcan's emulsion was not present either. Neither Alcan nor the government suggests that in the face of evidence that Alcan disposed of emulsion and a stipulation that this emulsion was stored in Tank One, the Court should conclude that the absence of the emulsion at the time of testing suggests that the emulsion was never there. Accordingly, the Court will not conclude based on the absence of PCBs in Tank One's sludge that the tank never contained PCBs.

Pet. App. 44a.

The district court does not provide any scientific explanation of why it completely ignores its expert's model. The court says the absence of emulsion at the time of testing does not prove the emulsion had never been there. That is certainly true and no one disputed the emulsion's presence, but it is irrelevant to the model and the question of whether PCBs had been present in the emulsion. The only other evidence in the record about whether PCBs in Alcan's emulsion would concentrate in sludge supports the model.

See C.A. App. 515. Again, the district court wrongly threw out the model, which predicted how any PCBs in Alcan's emulsion would have behaved in the Fulton tank, and which should have been dispositive absent evidence the model or test results were flawed.

The Second Circuit failed to give credence, for no sound reason, to the court-appointed expert's model and apparently relied on indirect, circumstantial evidence that is not supported by the tank's sludge test results (nor by the soil test results for the area surrounding Tank One). The Second Circuit's failure to apply sound scientific principles was in error. The integrity of the federal courts in environmental cases is threatened if this type of failure is not addressed.

B. The Second Circuit Erred By Concluding That A Company Is Subject To CERCLA Liability Where Such A Conclusion Could Be Made Only If The Court Ignored, For No Sound Reason, Unambiguous Testing Data.

The Second Circuit upheld the district court's finding that nickel was present in Alcan's emulsion. *See* Pet. App. 10a. In light of its PCB ruling, the Second Circuit did not reach the question of whether its nickel ruling (or the presence of other metals) would provide an independent ground for making the special exception unavailable.[2] The Second Circuit did state, however, that its review of the district court's divisibility analysis is "predicated on" the fact that Alcan's waste emulsion contained nickel, other metals, and PCBs. *Id.* The presence or absence of nickel thus was a factor in the Second Circuit's divisibility analysis—an

[2] As discussed *supra*, the district court used the presence of nickel as one of the grounds to support its finding that the special exception was unavailable to Alcan. *See* Pet. App. 50a.

analysis that should never have been reached, because Alcan should have qualified for the special exception.

Laboratory tests exist to determine the types and concentrations of nickel and other metals in Alcan's emulsion. These tests unequivocally show whether nickel is present above the detection limit. In 1989, the U.S. Environmental Protection Agency (USEPA) took a number of emulsion samples at Alcan's Oswego plant, and two laboratories performed laboratory analyses on the samples.[3] *See* C.A. App. 1438-44. Nickel was not detected in any of the nineteen (19) validated laboratory analyses. *See* C.A. App. 1443-44, 1448-51, 1457-88. This should have ended the inquiry.

The Second Circuit's decision does not mention these laboratory tests or how the court could nonetheless conclude nickel was present. The district court judge initially said he was "not aware of any sampling results that indicate nickel was not in the emulsion." Pet. App. 36a. In his decision on Alcan's motion for reconsideration, the district court judge stated that the nickel test results were not conclusive because of poor laboratory quality assurance and control. *See* C.A. App. 190-91. While it is true the USEPA did not accept the results from one of the laboratories for quality control reasons, the USEPA did accept the metals results from the second laboratory, including the nineteen results showing no

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[3] The USEPA's report about the laboratory analyses states the metal constituents in the emulsion likely did not change between the period when Alcan sent its emulsion to the PAS and Fulton sites and 1989, when the USEPA took the samples at Alcan's factory. *See* C.A. App. 1444; *see also id.* at 543, 1012. The government introduced this report as Government Exhibit G-36 and relied on it for evidence as to what metals Alcan sent to the sites. *See* C.A. App. 545-48.

nickel was detected in the emulsion.[4] *See* C.A. App. 552, 557-58, 1443-44, 1448-51, 1457-88.

The district court found that nickel likely was present in Alcan's emulsion because of a hypothesis of both the court-appointed expert and a government expert. These experts noted that other metals had made their way into the emulsion during Alcan's manufacturing process and there was no reason to expect that nickel would not have done the same thing. *See* Pet. App. 35a-36a.

While this hypothesis may appear reasonable on its face, the Second Circuit and district court should not have accepted it. Rule 702 of the Federal Rules of Evidence states that an expert opinion can be considered only if, among other things, "the witness has applied the principles and methods reliably to the facts of the case." As this Court stated in

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[4] The USEPA sent the samples to two laboratories. One of the laboratories had poor quality control measures, and the USEPA threw out that laboratory's results as unreliable. The USEPA accepted the other laboratory's results. *See* C.A. App. 552, 557-58, 1443. That laboratory ran three (3) different types of analytical tests on each of its ten (10) samples, for thirty (30) tests in all. *See* C.A. App. 1443, 1448-51, 1457-88. Nineteen (19) of those results list the detection limit and unequivocally show nickel was not detected ("U" means "not detected." *See* C.A. App. 558. *See id.* at 603-04 for a definition of the term "detection limit"). Ten (10) results are invalid because of trip blank contamination, which meant those ten emulsion samples might also have been accidentally contaminated by outside sources ("B" means trip blank contamination—*see id.* at 559). No laboratory data sheet is provided in the USEPA report for one of the test methods for one sample. The district court mistakenly thought one data sheet found at C.A. App. 1456 showed nickel in Alcan's emulsion. *See* C.A. App. 191 n. 4. That data sheet, however, was for an analysis of a control sample (*not* the emulsion) containing known quantities of various metals and that analysis was performed to show the laboratory's procedures were properly calibrated.

Daubert, 509 U.S. at 590, "Proposed testimony must be supported by appropriate validation—*i.e.*, 'good grounds,' based on what is known." But the court-appointed expert and government expert relied on a hypothesis that is at odds with the measured data. This may be because neither seemed aware of the relevant data. When the government expert was cross-examined at trial, he maintained no analyses for nickel had been performed on the emulsion samples. *See* C.A. App. 1051-53. He acknowledged such analyses had been done only after he was shown the USEPA report. See C.A. App. 1055. The court-appointed expert stated in his letter to the district court that the concentrations of certain metals such as nickel had not been measured. C.A. App. 1071. This was incorrect, as the nickel concentrations *were* measured and were found to be below the detection limit.

This Court stated in *Daubert*, "Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified...." 509 U.S. at 593 (citation omitted). Unlike many areas of the law where there are no clear right or wrong answers, the laboratory tests in this case do inform the courts whether this particular hypothesis is right or wrong. The hypothesis is incorrect because the data (the 19 laboratory analyses) do not support it. Instead of throwing out the uncontroverted data, the Second Circuit should have thrown out the hypothesis, unless there is an independent reason to think the measurements were flawed.

The Second Circuit's failure to find the laboratory tests dispositive was in error and counter to the principles in *Daubert*. In light of the Second Circuit's errors regarding scientific models and laboratory testing, this Court needs to provide guidance on the use of such models and test results

to assure the integrity of future federal court decisions in environmental cases.

CONCLUSION

For the foregoing reasons, the Court should grant the petition for a writ of *certiorari*.

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